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## XII.

CONTRIBUTIONS TO NORTH AMERICAN  
BOTANY.

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Presented February 8, 1882.

I. *Studies of Aster and Solidago in the Older Herbaria.*

ASTER and SOLIDAGO in North America, like *Hieracium* in Europe, are among the larger and are doubtless the most intractable genera of the great order to which they belong. In these two genera, along with much uncertainty in the limitation of the species as they occur in nature, there is an added difficulty growing out of the fact that many of the earlier ones were founded upon cultivated plants, some of which had already been long in the gardens, where they have undergone such changes that it has not been easy, and in several cases not yet possible, to identify them with wild originals. Late flowering *Compositæ*, and Asters especially, are apt to alter their appearance under cultivation in European gardens. For some the season of growth is not long enough to assure normal and complete development, and upon many the difference in climate and exposure seems to tell in unusual measure upon the ramification, inflorescence, and involucre bracts, which afford principal and comparatively stable characters to the species as we find them in their native haunts. I am not very confident of the success of my prolonged endeavors to put these genera into proper order and to fix the nomenclature of the older species; and in certain groups absolute or practical definition of the species by written characters or descriptions is beyond my powers. But no one has ever seen so many of the type-specimens of the species as I have, nor given more time to the systematic study of these genera. The following notes should therefore be of use.

It is noticeable that the herbarium of Nees von Esenbeck for *Aster* is not referred to. *I cannot ascertain what has become of it.* But



ad apicem attenuatis nunc valde papilloso-muricatis; ab *E. barbiger* differt calyce sæpius dimidio minore haud villoso; nuculis sæpius 4 fertilibus. — Southern part of California (from Los Angeles, *Nevin*, &c.) to adjacent Arizona. Not uncommon in collections, has been confounded at times with both of the two species mentioned: if it should pass into *E. muriculatum*, the character of that species would require much extension. It has been collected by *Parry*, *Lemmon*, *Parish*, *Cleveland*, &c.

ERITRICHIUM RACEMOSUM, Watson in herb. *Krynitzkia*, *Pseudo-Myosotis*, e basi lignescente perenne, ramosissimum, setis rigidis subsparsis hispidum; foliis linearibus parvulis; floribus racemoso-paniculatis sparsis, nonnullis folioso-bracteatis; pedicellis flori subæquilongis; calyce setis rectis patentissimis rigidis instructo, segmentis lanceolatis acutis tubo corollæ albæ breviter hypocrateriformis brevioribus; nucula fertili sæpius unica (fere lineam longa) e basi lata sursum angustata dorso parce muriculata intus sulco sursum angustato tota longitudine gynobasi subulata in stylum sat gracilem producta adnato. — Mesquite Cañon, San Bernardino Co., California, March, 1881, *S. B. & W. F. Parish*. The calyx and pedicel appear to be persistent.\*

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taken for Lehmann's *E. diffusum*, because of his description of the corolla ("Corolla alba? magna, tubus calyce paullo longior sensim ampliatus"); and Californian specimens of the real *E. diffusum* were mixed with it. The original specimens of the latter do not have the exerted tube of the corolla which marks the present species when in blossom, as does the fruit at maturity. It is the *E. nervosum* of Kellogg; but neither the leaves nor the sepals are perceptibly nervose (the former not "3-5-nerved" nor the latter "3-nerved"), so that the name would be a false one.

\* \* \* *E. Mexicanum*, Hemsl. (*Cynoglossum Mexicanum*, Schlecht, in Linnæa, & DC. Prodr. x. 156), is an apparently biennial species with slender prickles covering the whole surface of the fruit, but with corolla-tube not exceeding the calyx.

\* ERITRICHIUM, § PLAGIOBOTHRYIS.

Good specimens and careful notes, kindly communicated by the Rev. J. C. Nevin of Los Angeles, and a consequent re-examination, enable me to distinguish the species of the first subdivision in the Syn. Fl. N. Amer. (p. 192) more clearly than is done in that work. It will be seen that one of them requires a change of name.

*E. FULVUM*, A. DC., the *Myositis fulva*, Hook. & Arn. Bot. Beechey, p. 38, and I suppose *Plagiobothrys rufescens*, Fischer & Meyer, as appears from the habitat, were all founded on the Chilian plant. My specimens of this, from Bertero's